Hi:  
  
My background in Analytical Chemistry is not that closely related to engineering but my wide interest in hobby science might allow me to make some informal suggestions to at least get you started.   
  
1. I'm not certain but I believe that perhaps the Mythbusters from the Discovery Channel might have done something involving sticky/non-sticky surfaces that you might borrow from. You can look up their episode topics online.  
  
2. There are usually two types of 'sticky' and Stan Lee's Superhumans had an episode where this one fellow had especially 'sticky skin' where he could place spoons and other smooth metal objects on his skin. Come to find out was more to due with the 'suction' type rather than the 'clasping' type. You might want to watch this particular episode for entertainment value alone.  
  
3. Find the Modern Marvels episode about Adhesives. Watch it. Take notes. It's on Itunes and is less than the price of a Whopper if you want to own it.  
  
4. Try and see if 'How it's Made' or shows like it have Adhesive episodes, find them and watch them.  
  
5. Many professionals whether they be professors, engineers, etc. either concern themselves with adjusting the adhesive value of an object (the gum in your case) or the adhesive resistance properties of a surface (the shoe in your case). When searching for experts keep this in mind.   
  
  
  
My first pass at approaching this project would be to have a presentation in two parts.  
  
Part 1: Why gum sticks to the bottom of leather shoes.   
  
Explain what sticking is. Talk about how gum is malleable enough to fit in the surface features and provides mechanical leverage and suction. State the reasons why leather is used and the challenges in using other materials for durability/wear properties.  
  
  
  
Part 2: Propose a new coating/material used for the shoe soles.   
  
You could google/wikapedia non-stick surfaces used in cooking, get an idea of why they work like that and then try and google your way to a flexible coating that has the properties of a non-stick surface or fabric (how about those water resistant coats or jeans?). You can then list the strengths and weaknesses of each material as relevant to being used as a shoe sole. Summarize your best choice and honestly assess its implementation.  
  
  
  
All of that should be presented in a slick power point presentation and if you all were able enough try and place 'snipits' of Modern Marvels (30s explanations they give) 'inside' or toggleable during your presentation if that's allowed. Don't have the class watch the whole episodes but some of the 30s 'molecular' movies would be very appropriate and would convey more meaning than words or a static image during your sales pitch.   
  
Ask first, don't get disqualified.   
  
At Butler University in Indianapolis the Chemistry Lecturers use Modern Marvels to help teach non-major Chemistry students for some of their class sessions. I'd be very surprised if High Schools aren't using educational episodes from History, Discovery, TLC, etc. as supplemental teaching aides already.  
  
  
Good Luck,  
  
  
Jeremiah Bowers